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Announcement of
Farm Study Courses
1943-44

New York State
College of Agriculture



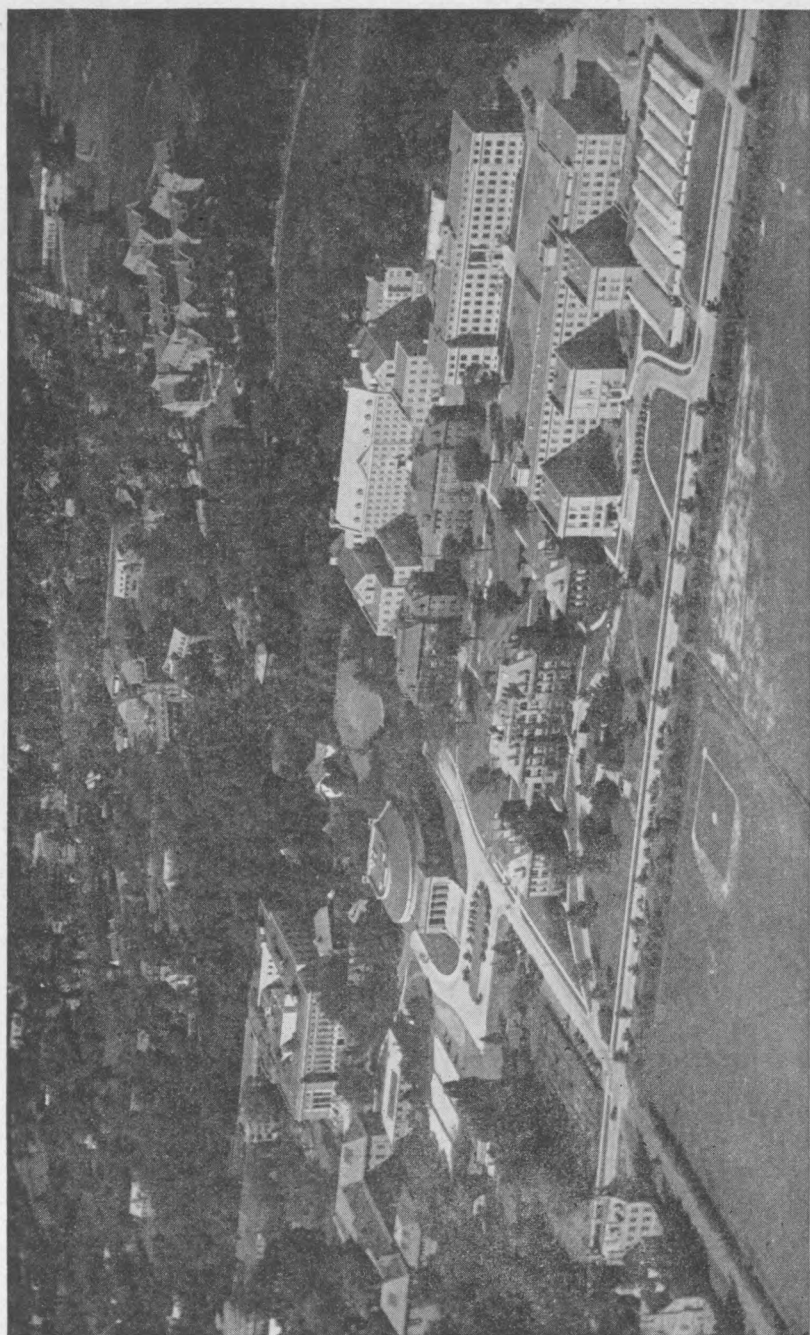
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THE MAIN GROUP OF BUILDINGS OF THE NEW YORK STATE COLLEGE OF AGRICULTURE

The lower left corner shows part of the hospital of the veterinary college; the semicircular building is Bailey Hall, the largest auditorium on the Cornell campus; the large light-colored building above and at the right of Bailey Hall is Martha Van Rensselaer Hall, which houses the College of Home Economics; directly at the right of Bailey Hall from left to right are Comstock Hall (entomology), Caldwell Hall (soils and agronomy), and Warren Hall (agricultural economics). In the center foreground is the Roberts Hall group: in the left wing, Stone Hall is the agricultural library, in the center are the offices of the dean, the director of extension, the secretary of the college, and other administrative offices; and the right wing houses the department of vegetable crops. In the lower right corner is the plant-science building. Agricultural buildings not shown in this picture are Fernow Hall (forestry), Rice Hall (poultry), the dairy building, and Wing Hall (animal husbandry).



CORNELL FARM STUDY COURSES

OFFICERS OF ADMINISTRATION

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William Irving Myers, Dean of the College of Agriculture.
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Bristow Adams, Chief of Publication.
George Samuel Butts, Supervisor of Farm Study Courses.

INSTRUCTING STAFF

Edmund Louis Worthen, Extension Professor of Soil Technology.
Elton James Dyce, Extension Assistant Professor of Apiculture.
John Peter Willman, Professor of Animal Husbandry.
Clinton Beaumont Raymond, Extension Assistant Professor of Vegetable Crops.
Lowell Clem Cunningham, Extension Professor of Farm Management.
Harold Anthony Willman, Extension Assistant Professor of Animal Husbandry.
Clarence Greenfield Bradt, Extension Assistant Professor of Animal Husbandry.
Robert Dean Sweet, Extension Assistant Professor of Vegetable Crops.
Floyd Edward Andrews, Extension Instructor in Poultry Husbandry.
Louis James Edgerton, Instructor in Pomology.
Edwin Stanley Shepardson, Extension Instructor in Agricultural Engineering.

NEW YORK STATE COLLEGE OF AGRICULTURE CORNELL FARM STUDY COURSES

FOR the past two years farmers have produced record crops in spite of great difficulties. They have been troubled by the lack of help, farm machinery, fertilizer, and spray materials; but have accepted these difficulties as their share in the war effort.



A TYPICAL MODERN FARM HOME

The New York countryside is dotted with attractive farmsteads that offer every comfort and convenience of urban life.

As never before, farmers have sought help from every reliable source to attain maximum efficiency. One such source for New York farmers has been the Cornell Farm Study Courses. These courses give the latest recommendations based on scientific research and proved practices. New York farmers can study, without leaving home, almost any branch of agriculture, and they can practice the principles that are taught.

The courses do not attempt to take the place of college classes, and no college credit is allowed for them. They are meant to give the farmer a chance at spare-time study when he may glean from books and from lessons prepared and marked by teachers at the College, new knowledge which will help him to earn more money and to get greater satisfaction from his job.

Who May Enroll

THE student should have at least a grammar-school education, and should be able to practice what he is taught.

So-called practical exercises are a part of most of the courses, and they show the application of the instruction given in the lessons. Incidentally, this requirement insures that the efforts of the College are being spent on persons who are truly interested. Many students write that they find the practical work the most valuable part of their courses.

One may enroll at any time, and, since the lessons are sent out as the reports on the preceding lessons are received, the student's progress depends entirely upon his own initiative. A year is allowed for the completion of any one course, and a certificate is awarded by the College at the completion of each course. A student may enroll for only one course at a time.

The courses are available to residents of New York State only.

Textbooks and Costs

No tuition or other fees whatever are charged for the courses. The student must purchase his own textbooks which, together with postage and necessary writing materials, constitute the only expenses. Some of the courses require no textbook. For most of the courses, one textbook only is required; for some, additional books are recommended as supplementary reading. It is often advisable to make a more thorough study of certain questions brought to the minds of the students by the courses, and students have appreciated knowing to what books they should refer.

How to Order Textbooks

At the end of the description of each course is the name of the textbook required, and the names of those recommended, with the name of the publisher of each. If the student is unable to buy the books at a local bookstore, it is suggested that he send to the Cornell Co-op, Ithaca, New York. It will prepay the postage if the student says in his letter that he is enrolled for a Cornell Farm Study Course. Orders for textbooks should *NOT* be sent to the College of Agriculture.

How to Enroll

THE application blank at the back of this booklet should be filled in completely and sent to the Cornell Farm Study Courses, Ithaca, New York. A description of the facilities for doing the practical work in the course desired should be given in full. If a student plans several courses in sequence in one general subject, the order in which they will be taken should be planned ahead, and consideration given to the time of year. For example, in enrolling for a poultry course in the fall, one should more properly select Poultry Flock Management than Chick Rearing.

When a student completes a course and continues with a second course, as most students do, he should make a new application. He can thereby give his instructor the latest information about his farm business. Separate application blanks can be obtained from the farm-study-course office.

How to Ask Questions

STUDENTS often wish questions answered about their own farm business. These should be in the form of a personal letter to the instructor, and such letters may be enclosed with lesson reports. The student should never ask questions on the same sheet with the lesson reports.

DESCRIPTION OF COURSES

THE following pages describe all of the Cornell Farm Study Courses now available. Inquiries regarding courses other than those offered are welcome. At Cornell University only the College of Agriculture offers correspondence courses.

AGRICULTURAL ECONOMICS AND FARM MANAGEMENT

Introduction to Agriculture

Professor L. C. CUNNINGHAM

10 lessons

This course is designed for those persons with no recent farm experience who plan to engage in farming.

The student is given an introduction to the business of farming. Some of the subjects covered are: reasons why certain definite types of farming are found in certain areas, profits to be expected in farm-

ing, large versus small farm businesses, specialized versus diversified farming, part-time and subsistence farming, value of practical farm experience, and ways for inexperienced persons to get started in farming.

This course is highly recommended for city persons who are considering farming as a business.

Textbook: *Farm Management and Marketing* by Hart, Bond, and Cunningham, published by John Wiley & Sons, Inc., New York City. \$2.75.

Elementary Farm Management

Professor L. C. CUNNINGHAM

10 lessons

This course deals with such subjects as farming as a business, factors determining types of farming, the right type of farming for the student's home region and his home farm, relation of size of farm business to efficiency in the use of labor and capital, the most profitable size of farm business, diversified versus specialized farming, the most profitable combination of crop and livestock enterprises for the student's home farm, relation of different rates of crop and animal production to profits in farming, ways to get efficient use of labor, and the most important factors affecting the profits of a farm business.

Several of the lessons in Elementary Farm Management are based on facts and figures that the student obtains locally. Therefore, the course is open only to persons who are actually living on a farm or to those who have had ample farm experience and either own a farm or are closely associated with the management of one. This course is especially recommended for young men who have had farm experience and are getting ready to start in farming for themselves.

Textbook: Same as for Introduction to Agriculture.

Advanced Farm Management

Professor L. C. CUNNINGHAM

10 lessons

This course must be preceded by either Elementary Farm Management or Introduction to Agriculture.

The course deals with such subjects as farm layout and building arrangement, the farm-management point of view on farm power and machinery, use of credit and capital, ways to get started in farming, practical farm records and accounts, and planning the organization and management of a specific farm business.

Textbook: Same as for Introduction to Agriculture.

Milk Marketing

Professor L. C. CUNNINGHAM

10 lessons

This course covers the essential facts in the marketing of milk from the time it is received at the country plant until it reaches the consumer. It deals with the following topics: specific problems of the geography of the production of milk and milk products, variations in supply, cost of handling milk in country milk plants and costs of transportation, cost of distribution, the spread between the farm and retail price of milk and how to measure correctly the spread, variations in the demand for milk, factors affecting the price that farmers receive for their milk, price plans, differentials, cooperative marketing, and public regulation.

This course is recommended for farmers, milk dealers, consumers, and any others who have an interest in milk problems.

Textbook: Same as for Introduction to Agriculture.

Agricultural Prices

Professor L. C. CUNNINGHAM

9 lessons

The course explains the principles that govern prices of farm products.

The work of the course is in two parts: (1) a study of the forces that caused the whole price level of the country to fluctuate, and, (2) a study of the reasons why prices of individual farm products fluctuate around the price level.

Each lesson covers one topic. Among the topics studied to obtain an understanding of the price level and prices of farm products are gold, industrial activity, reasons why some prices are sensitive and



COMBINE HARVESTING OATS

Modern farm machines have brought about many changes in farm operations in New York State. They have had little effect, however, on the types of farming carried on in the various parts of the State

some sluggish, relationship between supplies and prices of farm crops, and cycles in the prices of cows, horses, sheep, and hogs.

No textbook is required. Each student is supplied with a study manual especially prepared for this course which gives the important principles of prices.

ANIMAL HUSBANDRY

Feeding and Management of Dairy Cows

Assistant Professor C. G. BRADT

10 lessons, 3 practical exercises

Dairying is probably the most important single farm enterprise in New York State, and the demand for milk from near-by cities is increasing year by year. This, of course, makes efficient management of the dairy herd of great importance to both the farmer and the consumer.

This course deals with practical problems of feeding and managing dairy cows economically. It is intended for persons who are actually in the milk-producing business or for those who have a chance to study a herd of cattle at first hand.

The following topics are covered: feeding for milk production, kinds and composition of feeds, fitting and management of dairy cows, cost of producing milk, housing, and causes and treatment of some of the common ailments and diseases of cattle.

Textbook: *Dairy Cattle and Milk Production* (1939 edition) by Eckles, Anthony, and Palmer, published by the Macmillan Company, New York City. \$3.90.

Dairy Herd Improvement

Assistant Professor C. G. BRADT

9 lessons, 1 practical exercise

The best management cannot produce satisfactory results from inferior cows. Thousands of dollars are wasted annually in this State alone in feeding cows that do not pay for their board. The efficient dairyman tries to improve the quality of his herd.

This course presents practical ways and means of getting better cows. First, the inferior cows must be identified and removed, and then better ones obtained by better breeding practices. Breeding practices and methods of improvement that can be followed by all are presented clearly and in detail. The course should appeal to the man of limited means who realizes that good cows are essential to good profits, and are easily within his reach.

Textbooks: Same as for Feeding and Management of Dairy Cows.

Rearing Calves and Heifers

Assistant Professor C. G. BRADT

7 lessons, 3 practical exercises

The care a calf receives in the first few months can determine to a great extent whether or not it will make a good cow. This course, however, considers not only the essential steps in rearing the calf from birth to maturity, but it recognizes that more than good feed and care is needed to produce a good cow. So much depends upon the health and the vigor of the parents, as well as upon the sanitary conditions of housing and care, that these also receive attention.

The topics with which this course deals are: feeding of calves, both with milk and milk substitutes; housing, which includes ventilation

and plans for stables and pens; losses from the common diseases of calves and heifers, and how they can be prevented; and the importance of high-producing ancestry in the selection of calves to raise.

Textbook: Same as for Feeding and Management of Dairy Cows.

Sheep and Wool Production

Assistant Professor H. A. WILLMAN

9 lessons

Sheep are coming back to many New York farms. This course is valuable to producers of both wool and mutton, and describes practices that successful shepherds in the State find profitable. It requires the management of a flock throughout the year.

The course considers such topics as establishing the flock, winter care and feeding, rearing lambs, the wool grower and the wool trade, common ailments of sheep, dipping, trimming the feet, parasites and parasitic diseases, stomach worms, summer feeding and care, feeding for market, winter or hot-house lambs, fitting for the show ring, judging sheep, and breeds.

Textbook: *Productive Sheep Husbandry* (1937 edition) by W. C. Coffey, published by J. B. Lippincott Company, Philadelphia. \$3.50.

Pork Production

Professor J. P. WILLMAN

10 lessons, 1 practical exercise

Pigs, rightly handled, fill an important place on many New York farms. This course deals especially with New York conditions, and is based on the practices found profitable by practical swine producers as well as by scientists.

The subjects considered are: the care of the herd throughout the year, brood sows and pigs, housing, forage crops, feeds, feeding and rations, sanitation, judging, breeds, breeding, and marketing. A study is made also of the cost of producing pork in New York State.

Textbook: *Pork Production* (1937 edition) by William W. Smith, published by the Macmillan Company, New York City. \$3.75.

BEEKEEPING

Beekeeping

Assistant Professor E. J. DYCE

13 lessons, 8 practical exercises

Many New York farmers find beekeeping both a fascinating and profitable side line to their farm business, and some have apiaries that demand their full time and attention. Bees are not unlike dairy cows or poultry in that the best care and the best management are needed to prevent disease and to have profitable production. The successful beekeeper must have a knowledge of how to market honey and other products of the apiary.

The lessons and exercises consider such topics as a survey of the beekeeping industry, apiary site and equipment, study of the colony and of the individual, state laws regarding bees, general care and management for both comb- and extracted-honey production, and grading and marketing honey.

Textbook: *Beekeeping* (revised edition) by Everett Franklin Phillips, published by the Macmillan Company, New York City. \$4.00.
Recommended book: *Productive Beekeeping* (third edition) by Frank C. Pellett, published by the J. B. Lippincott Company, Philadelphia. \$3.50.

FRUIT GROWING

Orchard Fruits

Mr. L. J. EDGERTON

17 lessons, 8 practical exercises

Fruit growing in New York becomes more exacting each year. It is necessary to produce good fruit economically if one is to be a commercial fruit grower. This requires technical knowledge and good management. Also, the farmer with the home orchard gets great satisfaction from taking proper care of his trees even if the profit he may make from them is not so important.

The lessons and practical exercises cover practically every aspect of growing orchard fruits, from selecting the site and establishing the orchard to harvesting, grading, and packing the fruit.

Textbook: *Modern Fruit Production* by Gourley and Howlett, published by the Macmillan Company, New York City. \$4.50.

Small Fruits

Mr. L. J. EDGERTON

10 lessons, 6 practical exercises

Small-fruit growing is an important industry in certain sections of New York, and this course has been especially helpful to many growers.

The lessons are arranged according to kinds of fruit studied: strawberry, brambles, grape, currant, and gooseberry. For each, the lessons cover such operations as planting, harvesting, and insect and disease control. The practical exercises allow field practice in similar operations. The student is allowed some choice in the exercises.

No textbook is required. The course is based entirely on bulletins from Cornell, Geneva, and other experiment stations. These bulletins are sent without charge as needed.

POULTRY HUSBANDRY**Poultry Flock Management**

Mr. F. E. ANDREWS

14 lessons, 5 practical exercises

Poultry-keeping, as a business or a part in diversified farming, occupies a prominent position in New York Agriculture. Poultry respond to proper care and are seriously affected by mismanagement. Thus, a good working knowledge of the science and practice of poultry-keeping often means the difference between a profitable enterprise and one that ends in loss and failure. The lessons and practical exercises in this course help the student to learn good practices and to avoid many of the losses that come to those who lack this knowledge.

This course deals with the management of a laying flock, and covers selection of a breed; housing, feeding, culling, and breeding; diseases; and general poultry management. It deals also with the marketing of poultry and eggs. The student must have a flock of hens or have the management of one.

Textbook: *Poultry Science and Practice* by Winter and Funk, published by J. B. Lippincott Co., Philadelphia. \$4.00. Recommended book: *Modern Poultry Farming* by L. M. Hurd, published by the Macmillan Company, New York City. \$4.00.

Chick Rearing

Mr. F. E. ANDREWS

8 lessons, 4 practical exercises

Raising baby chicks can be one of the most interesting and at the same time one of the most discouraging aspects of the poultry business. The most experienced poultrymen will be likely to lose many chicks, and beginners sometimes have a mortality that is discouraging indeed.

Every aspect of caring for chicks from the time they are a day old until they are mature pullets ready for the laying house is thoroughly covered. A study is made also of brooding systems and of brooder houses and stoves, pointing out the essential features to be looked for when purchasing a brooder stove. Students, after completing this course, often express wonder that any of their chicks ever reached maturity with the care which they were accustomed to giving them.

Textbook: *Modern Poultry Farming* by L. M. Hurd, published by the Macmillan Company, New York City. \$4.00.

Poultry Flock Improvement

Mr. F. E. ANDREWS

9 lessons, 3 practical exercises

Poultry breeding is a relatively new science but a very old art. It has been practiced as an art from the time the first jungle fowls were captured and domesticated for the purpose of cock fighting,—the sport of kings. In modern times the art, with the application of science, has produced a large number of breeds and varieties of chickens, with extreme variations in size, shape, and color. Individual birds that have laid nearly 365 eggs in one year have been bred. Many persons breed birds purely as a hobby.

The course covers classification of breeds, principles and practices of culling, selecting, and mating breeding stock, and record keeping.

Textbook: *Judging Poultry for Production*, by Rice, Hall, and Marble, published by John Wiley and Sons, Inc., New York City. \$3.75.

Recommended books: *American Standard of Perfection*, published by American Poultry Association, Fort Wayne, Indiana (1939 edition). \$2.50. *Poultry Breeding* by M. A. Jull, published by John Wiley and Sons, New York City. \$4.00.

Incubation

Mr. F. E. ANDREWS

6 lessons, 2 practical exercises

Reproducing a large part of the flock each year is one of the poultryman's biggest problems. Many losses are experienced because of lack of knowledge concerning the requirements of the hatching eggs during incubation. Such knowledge is essential to anyone who attempts to do his own incubating. This course is especially helpful to commercial hatcherymen.

This course deals with the following topics: formation of the egg and the development of the chick, selection and care of hatching eggs, artificial incubation, types and operation of incubators, and pedigree hatching.

Textbook: *Practical Poultry Management* by Rice and Botsford, published by John Wiley and Sons, Inc., New York City. \$2.75.

Back-Yard Poultry-Keeping

Mr. F. E. ANDREWS

6 lessons

Many who live in villages or in suburbs of cities or who live on farms keep a small flock of hens to provide eggs and meat for family use. Often these flock owners are unfamiliar with the care and management that chickens require to remain healthy, grow normally, and lay well. To meet this need, the College offers this elementary course in poultry-keeping. Those who have, or plan to have, a larger poultry enterprise are advised to enroll for the Poultry Flock Management or Chick Rearing course.

No textbook is required. All material for study is furnished in mimeographed reading references and in printed bulletins.

AGRICULTURAL ENGINEERING**Farm Mechanics**

Mr. E. S. SHEPARDSON

8 lessons

To be able to make minor repairs on a harness or to splice a broken hay rope on the farm immediately when needed, not only saves money but time which cannot always be reckoned in dollars and cents. This course teaches one how to do these along with many

other operations which a farmer should be able to do. Although only eight lessons are required, the student may select these from a total of fifteen, and, of course, if he wishes, he may do all of them.

Instruction is given in the following subjects: rope work, soldering, harness repairing, belts and pulleys, fitting saws, sharpening edged tools, caring for small hand tools, and common rafter framing.

No textbook is required, but *Farm Mechanics*, Vol. I, by B. B. Robb and F. G. Behrends, published by John Wiley and Sons, Inc., New York City, \$2.50, is recommended. There is a small cost for the supplies needed for some of the lessons. These supplies, however, can be used on the farm later when actual need for them arises.

SOILS

Soil Management and Fertilization

Professor E. L. WORTHEN

12 lessons

Good soil management is essential to the economic production of crops. Improper management can deplete the best soils in a few years, and on the other hand soils that are not naturally productive can often be made so by drainage, by crop rotation, by growing legumes, and by the use of lime and fertilizer. It is evident, therefore, that a practical knowledge of soil management and fertilization is of the greatest importance to every farmer.

Each lesson in this course is closely related to an actual farming operation. The following topics are covered: selecting the soil and planning its management, growing the crop, controlling the water supply, tilling the soil, manuring, fertilizing, managing field soils, managing pasture soils, managing garden and lawn soils, and managing fruit soils.

Textbook: *Farm Soils* (third edition) by Edmund L. Worthen, published by John Wiley and Sons, Inc., New York City. \$2.75.

VEGETABLE CROPS

Commercial Vegetable Growing

Assistant Professor R. D. SWEET

14 lessons

Vegetable production is an important type of farming in New York State, and it is increasing in importance yearly as the agriculture

shifts from general to specialized types. This course is intended for persons who are engaged in vegetable production as a business and for those who contemplate going into this business.

The first eight lessons cover the general aspects of vegetable growing such as: soils for vegetable growing; soil preparation; manures, green manures, and commercial fertilizers; plant growing; construction and management of hotbeds and cold frames; and the harvesting and handling of vegetable products as these operations are carried on in New York State. The remaining five lessons are on specific crops or, in some cases, on groups of crops. The student is allowed to select the particular crops, or group of crops, he wishes to study. The practical exercises show the application of the lessons to vegetable growing according to the season of the year.

Textbook: *Vegetable Crops* (third edition) by H. C. Thompson, published by the McGraw-Hill Book Company, New York City. \$5.00.

Home Vegetable Gardening

Assistant Professor C. B. RAYMOND

7 lessons

This course is intended for all home gardeners whether in town or in the country. Housewives, and especially those who have studied nutrition in home-bureau groups, find the course an interesting and valuable supplement to their food studies. Older boys and girls who have completed two years of the junior garden project are invited to enroll.

The topics covered are: the importance of the garden to the family, and the place of vegetables in the diet; garden soil, with emphasis on preferred types for vegetable growing; the influence of soil reaction, and the use of lime, stable manure, commercial fertilizer, and cover crops, and how each is best applied; planning the home garden; a study of all of the important individual crops, covering such points as choice of varieties, time of planting, quantity of seed needed, spacing, and culture; care after planting, including such items as cultivation, weed prevention and control, succession plantings, and control of insects and diseases; various methods of storing vegetables.

Textbook: *Grow Your Own Vegetables*, by P. W. Dempsey, published by Houghton-Mifflin Company, Boston. \$2.50.

Application for Enrollment

(Please print or typewrite name and address)

Return this blank when filled out to Cornell Farm Study Courses,
New York State College of Agriculture, Ithaca, New York.

Put questions you want answered now on another sheet, and be
sure to put your name and address on it.

Date.....Course you wish.....

Name in full.....
R. F. D.

Street.....Post office.....

County....., N. Y.

How much time can you devote to study?.....

What is your object in taking the course?.....
.....

Give name of schools attended and number of terms in each.....
.....

Outline briefly your experience with the subject of this course; tell whether as
owner, owner's son, tenant, hired man, or other status.
.....
.....

What is your occupation?.....Age.....

(If a farmer, what position on the farm)

Give the location, size, and type of farm where you will do the practical work of
the course, describing fully the particular enterprise with which this course is
concerned. (See note.)
.....
.....
.....

Are your family members or officers of the farm bureau, the home bureau, the
Grange, the cooperatives, or other organizations? State which.....
.....

How did you first learn of the course?.....

Number of farm study courses completed, if any.....

Note: The information on this sheet guides the instructor in his personal help
to you. Use the back for anything further that you think will help him.